

Appendix C

Waste Streams Containing Irradiated Subassembly Hardware Sent from INTEC to the SDA from 1952 through 1983

CONTENTS

C-1. INTRODUCTION	5
C-2. REPROCESSING HISTORY OF EBR-II FUEL AT INTEC	6
C-3. ANALYSIS OF THE EBR-II SUBASSEMBLY INVENTORY	7
C-4. UNCERTAINTY ANALYSIS	9
C-5. COMPARISON OF CALCULATED RESULTS TO THE RWMIS DATA	10
C-6. REFERENCES.....	36

TABLES

C-1. Extracts from the four INTEC electrolytic dissolution campaigns.	11
C-2. The subassembly mass and the computer calculated radionuclide inventory (curies) contained within the stainless steel hardware of several EBR-II subassemblies at various core locations.	12
C-3. Average or typical concentration values for those elements that occur in stainless steel-304.	12
C-4. A yearly summary of the radionuclide inventory contained within the EBR-II subassembly steel that was sent to INTEC as a function of the EBR-II shipment date. Isotope half-lives (in years) are listed on the second row of the title descriptions.....	15
C-5. Summary of the radionuclide inventory contained within the EBR-II subassembly steel that was processed at INTEC during the several EBR-II reprocessing campaigns. Isotope half-lives (shown in years) are listed on the second row of this table.....	16
C-6. Comparison of the calculated and reported (RWMIS) inventory contained within the EBR-II subassembly steel that was processed at INTEC during the several EBR-II reprocessing campaigns. Isotope half-lives (shown in years) are listed on the second row of the title descriptions.	17
C-7. Best-estimate inventory (Ci) contained within the irradiated stainless steel wastes generated at INTEC during the reprocessing of EBR-II subassembly fuel and then buried at the SDA.....	18
C-8. Best-estimate inventory (Ci) contained within EBR-II subassemblies shipped to INTEC (does not include the fuel activity.	19

C^A

Appendix C

Waste Streams Containing Irradiated Subassembly Hardware Sent from INTEC to the SDA from 1952 through 1983

C-1. INTRODUCTION

Subassembly hardware and fuel elements that were irradiated in the Experimental Breeder Reactor II (EBR-II) have been temporarily stored, disposed of, or processed at several facilities for various reasons. For example, EBR-II subassemblies may have been stored within the EBR-II reactor vessel, temporarily stored at the Hot Fuel Examination Facility (HFEF) located at Argonne National Laboratory-West (ANL-W), stored at the Radioactive Scrap Waste Facility (RSWF, which is located behind the main ANL-W complex), sent to INTEC for fuel reprocessing, sent to Lawrence Livermore for laboratory analysis, or disposed of at the Radioactive Waste Management Complex (RWMC).

The RSWF served as an interim storage facility for spent nuclear fuel and remote-handled radioactive waste. Based on an analysis of ANL-W records (performed by Kent Perrenoud), from 1969 through 1976, 561 intact EBR-II subassemblies (containing irradiated fuel elements) were sent to INTEC (formerly called CPP and/or ICPP) for retrieval of the highly enriched uranium. Based on a review of the INTEC data (see Bjorklund et al. 1974; Mortimer 1978; or Houston 1978), it appears that at least 567 complete EBR-II subassemblies were processed. It is not clear why there is a small discrepancy between the two figures; nevertheless, the best-estimate radionuclide inventory analysis that is discussed in this appendix assumes that 561 intact EBR-II subassemblies were sent to INTEC from ANL-W, and that all of the nonfuel-bearing hardware was later shipped to the RWMC for disposal.

From 1977 until 1993, approximately 2,000 EBR-II subassemblies (consisting of irradiated stainless steel structural components without the fuel elements) were sent from ANL-W (or HFEF) to the RWMC for disposal. The neutron-activated inventory contained within the hardware that was sent directly from ANL-W to the RWMC is documented by Carboneau (MLC-01-98)^a with further analysis presented in Carboneau and Vail (2004). The radioactive inventory contained within the stainless steel hardware that still resides at ANL-W or at the RSWF is not of concern in this report. However, the results of ANL-W computer code calculations that were performed to characterize the EBR-II hardware that was directly disposed of at the RWMC is used here to determine the inventory contained within the hardware sent to INTEC, and subsequently shipped to the RWMC for disposal.

In addition to the 561 complete subassemblies (containing ~46,870 fuel pins)^b sent from EBR-II to INTEC, at least 18,883 pins were shipped to INTEC without the associated subassembly hardware. The estimate of 18,883 pins is based on an analysis of actual shipping data from ANL-W; however, the status of 58,422 additional pins has not been identified in the ANL-W records. It is believed that all (or at least most) of the unaccounted for 58,422 pins were actually shipped to INTEC, making a total delivery of 124,175 EBR-II fuel pins. From INTEC reports it is estimated that ~87,000 EBR-II pins (~5,288 kg of

a. Carboneau M. L., 1998, Lockheed Martin Interdepartmental Communication to J. A. Logan, "Reassessment of Neutron-Activation-Product Curies Sent from EBR-II to Disposal at the RWMC," MLC-01-98, February 27, 1998.

b. Most Mark-I and II driver subassemblies contained 91 fuel pins; however, some control subassemblies contained only 61.

uranium)^c were processed and that ~41,000 pins remain in storage. This indicates that INTEC must have received ~128,000 fuel pins from EBR-II. The two values (e.g., 124,175 and ~128,000) are reasonably consistent (within 3%). The neutron-induced activity in the stainless steel cladding associated with the fuel pins is expected to be small. In any case, the activation products within the stainless steel cladding would have ended up with the fission products that were contained within the calcine wastes; and in general, were not sent to the RWMC. An analysis of the inventory contained within the stainless steel hardware (e.g., the upper and lower components including the stainless steel hex can) associated with the 561 EBR-II subassemblies that were processed at INTEC, and then sent to the RWMC for disposal, is discussed in this appendix.

C-2. REPROCESSING HISTORY OF EBR-II FUEL AT INTEC

The Experimental Breeder Reactor-II (EBR-II) was authorized in 1955 and site preparation was begun on October 23, 1957. The main EBR-II complex was finished in 1961 and wet criticality was achieved (with sodium) on November 11, 1963. Limited power operation (30 MWt) was begun in 1964 and reactor experiments were installed in the core in May 1965. The EBR-II power was increased to 50 MWt on August 26, 1968 and then increased to 62.5 MWt on September 25, 1970. Commencing in 1965, core subassemblies were being replaced and removed from the reactor for examination and for reprocessing to recover the highly enriched uranium fuel. Although some fuel reprocessing work was conducted at ANL-W, most was accomplished at INTEC (i.e., ICPP or CPP). The earliest EBR-II irradiated fuel shipments to INTEC were made in 1969, and the first reprocessing of this fuel occurred in 1973. All of the reprocessing activities conducted at INTEC (on EBR-II fuel) were conducted on "uranium-fissium" metallic fuel. The following information was obtained from the four ICPP electrolytic dissolution reports shown in the references to this appendix (i.e., Bjorklund [1974], Mortimer [1978], Mortimer [1981], and Houston [1991]), and additional information that was collected by John Logan from a meeting held at ANL-W with Bevin Brush (ANL-W), Darrell Cutforth (retired; ANL-W), Leroy Lewis (INEEL), and Kent Perrenoud (retired; ANL-W) on February 22, 2000.^d

EBR-II fuel and/or hardware were delivered to INTEC in four different ways. In one way (Method A), on occasions occurring up to 1977, ANL-W sent complete subassemblies to INTEC where they were stored in a water-filled fuel storage basin. Subsequently, INTEC placed each subassembly on an underwater table saw, where the fuel-bearing section was separated from the rest of the hardware. The fueled section was then stored underwater pending reprocessing. The remainder of the subassembly hardware was eventually shipped to the RWMC for disposal.

In another way (Method B), occurring up to 1977, ANL-W personnel completely dismantled the subassemblies and then sent the fuel pins (or elements) to INTEC in one or more aluminum containers. This fuel was then placed in a fuel storage basin pending reprocessing. Reprocessing started by placing the aluminum container with its contents in a dissolver. In this case, the subassembly hardware was sent from ANL-W to the RWMC for disposal, or to the RSWF for temporary storage (pending some future program).

c. The value of 5,288 kg (~5.3 metric tons) was determined from data presented in the four ICPP electrolytic dissolution reports; however, another report (DOE/EA-1148) states that "approximately 6 metric tons of EBR-II fuel was processed at ICPP".

d. J. A. Logan, 2000, Personal communication with ANL-W personnel: Bevin A. Brush, Darrell Cutforth, Leroy Lewis, and Kent Perrenoud, obtained at ANL-W on February 22, 2000.

Another possible method (Method C), which has not been verified, could have occurred up until 1977. During this process, it is believed that ANL-W may have cut out the center or fuel-bearing sections (20 in. long for Mark IA subassemblies and 26 in. long for Mark II subassemblies) from irradiated driver subassemblies. During this process, the hex can structure would have been retained with the cut sections. Subsequently, the fuel-bearing sections were then sent to INTEC and stored in a fuel storage basin (water pit) pending reprocessing. The nonfuel-bearing upper and lower hardware portions of each cut subassembly were then shipped from ANL-W to the RWMC for disposal or were stored at the RSWF pending some future disposal campaign.

A fourth and final way (Method D – similar to Method B) was begun in 1977 and was applied to all subsequent EBR-II fuel shipments sent to INTEC. In this method, ANL-W dismantled each irradiated subassembly by removing the subassembly's hexagonal can, and then removed the fuel elements (typically 91), and then inserted 9 to 12 elements into each of a series of sealed stainless steel (SS)304 canisters (2 in. diameter, 29 in. long). The loaded canisters were then sent to INTEC where they were placed in a fuel storage basin pending reprocessing. Reprocessing consisted of placing a loaded canister in a dissolver tank, in which the canister with its contents were dissolved. In all cases, the disassembled subassembly hardware was sent to the RWMC for disposal, or to the RSWF for temporary storage.

The INTEC reprocessing work on EBR-II subassemblies or subassembly sections was accomplished during four campaigns: (1) January 1973 through April 1973, (2) February 1975 through May 1976, (3) August 1977 through September 1977, and (4) August 1981 through March 1982. Up to 1977, radionuclides leaching into the INTEC water pit water from EBR-II subassemblies, fuel elements, and subassembly sections greatly increased the water's radioactive contamination level, to such an extent that the gamma field from the water forced occupancy term limits on water pit personnel. Consequently, in 1976, INTEC declined to accept any more shipments from ANL-W. All EBR-II fuels on hand were removed from the fuel storage basins and dissolved in the Third Electrolytic Dissolution Campaign from August to September 1977. During its fourth electrolytic dissolution campaign (August 1981 – March 1982) INTEC reprocessed 1,436 stainless steel canisters (~15,000 fuel pins) and recovered 826 Kg of uranium (including 497 Kg U-235). The fuel was reprocessed by immersing the fuel-containing canisters in a dissolver tank so that the canisters, as well as their contained fuel elements, were dissolved.

Dissolution of EBR-II core fuel elements at INTEC was suspended in 1982 because of problems with the electrolytic dissolver. INTEC planned to refurbish the process before starting up again. Preparations were initiated for installing new electrolytic process equipment in a new facility, but this was never established. Reprocessing activities were terminated in April 1992 when the US Government decided to discontinue reprocessing irradiated nuclear fuel. Currently, 3,636 stainless steel canisters containing ~41,000 EBR-II fuel elements (~2.5 metric tons of uranium) remain in storage at INTEC. Table C-1 summarizes the pertinent information from the four ICPP (INTEC) reports concerning the electrolytic dissolution campaigns.

C-3. ANALYSIS OF THE EBR-II SUBASSEMBLY INVENTORY

The purpose of this section is to document the best-estimate inventory calculations for the 561 EBR-II subassemblies that were sent to INTEC from ANL-W. Under contract with the INEEL (performed under LMITCO Purchase Order #K97-177678), ANL-W personnel were funded to achieve three objectives: (1) determine which EBR-II subassemblies were sent from ANL-W to the RWMC for disposal; (2) calculate the radionuclide inventory in typical Mark II and Mark III driver subassemblies; and (3) produce a list of EBR-II subassemblies that were sent from ANL-W to INTEC for reprocessing. Darrell Cutforth at ANL-W (retired) was responsible for Item 1, Kermit Bunde at ANL-W performed the reactor physics calculations that answered Item 2; and Kent Perrenoud (retired from ANL-W) performed a records search and data compilation that supported Item 3 and produced a subassembly history.

Additional information was obtained from ANL-W employees Bevin Brush, Tom Zahn, and Mike Vaughn (retired). The information obtained from Darrel Cutforth, Kent Perrenoud, and Tom Zahn was combined into a single subassembly history file. Most of this information was reported in Carboneau (see footnote a); however, the data relating to the EBR-II subassemblies sent to INTEC have not been previously documented, and therefore is discussed in this section.

To begin, Kermit Bunde at ANL-W calculated the total activation product inventory contained within the stainless steel hardware of Mark II, Mark III, and other types of subassemblies irradiated at maximum burnup conditions and at various positions within EBR-II. Details of Bunde's calculations are discussed in Bunde's letter that appears in Appendix B of Carboneau. In general, Bunde performed the reactor physics calculations on all radionuclides shown in Table C-2 except for Cl-36, and all subassemblies, except for the Mark I subassemblies, both of which were later determined by Mr. Carboneau at the INEEL. The determination of Cl-36 was accomplished by using the average chlorine impurity concentration in SS304 (shown in Table C-3) and the ORIGEN2 computer code with a generic cross-section library for a sodium cooled fast reactor. A generic cross-section library was selected for the Cl-36 calculations because researchers at the INEEL did not have access to the ANL-W generated EBR-II cross-section library. Finally, the general inventory data for a Mark I driver subassembly was determined by scaling the computer calculated results for a Mark II driver subassembly in order to apply to Mark I conditions. For example, the Mark II results were calculated at 8.0 atom% burnup and the Mark I subassemblies only had a maximum burnup of about 1.7 atom%. Also, minor corrections were made because of differences in the estimated subassembly mass (18,934 g for Mark II and 14,261 g for Mark I subassemblies). The results of these calculations are summarized in Table C-2. Although Table C-2 shows the results of many types of EBR-II subassemblies, the vast majority of subassemblies sent to INTEC for reprocessing were either Mark IA and Mark II driver subassemblies (with 91 fuel elements each), or control rod driver assemblies (containing 61 fuel elements and 30 stainless steel dummy elements).

By applying the general inventory results from Table C-2 to each subassembly that was shipped to INTEC, the best-estimate activation product inventories were then determined for each subassembly. The results of these calculations are summarized in Tables C-4 and C-5; however, the detailed data are listed in Table C-8 for each shipped subassembly. The information in Tables C-4 and C-5 provides the foundation for estimating the amount of activation products that were later sent to the SDA from INTEC after these subassemblies were processed.

The best-estimate inventory analysis means that a reasonable effort was made to determine the activity associated with a subassembly under "average" conditions. For example, a subassembly with an average precursor impurity concentrations (e.g., an average N-14 concentration leading to C-14), and irradiated under typical power history conditions. Under ideal conditions, the best-estimate inventories will over-predict the activities in half of the shipped subassemblies and also under-predict half of the other subassemblies. However, within the "best-estimate" scenario, whenever an "average" situation is not known, and when a maximum situation can be determined, then the maximum variable was selected. For instance, the decay-time for each EBR-II subassembly prior to shipment to INTEC is not known; therefore, a zero decay-time (a worst case scenario) was assumed. Furthermore, when the impurity concentration of an important element varies, it is the mean value that is assumed in the best-estimate analysis. In maximum and minimum situations (as discussed in the next section), this variation is considered. For a specific example, consider the nitrogen impurity concentration in ANL-W stainless steel (see Appendix B of MLC-01-98; see footnote a). Nitrogen-14 is the main pre-cursor to the formation of carbon-14 (via a n-p reaction); and therefore, the impurity concentration of N-14 in stainless steel needs to be determined. Based on measured data obtained by ANL-W on SS304, it was observed that the nitrogen concentration was: $\mu = 0.047$ wt% with a $\sigma = 0.16$. The maximum observed nitrogen concentration in ANL-W SS304 was 0.067 wt% and the minimum concentration was 0.029 wt%. For the

best-estimate analysis, a mean concentration value of $\mu = 0.047$ wt% was used in the ORIGEN2 computer code calculations. Under a maximum or worst-case scenario, a value of 0.067 wt% should be used. Likewise, an average impurity concentration was selected for all other significant elements. Table C-3 lists the average impurity concentration and one- σ variation for all elements comprising SS304. Since a small portion of the stainless steel irradiated in EBR-II (and subsequently shipped to INTEC) was alloy-SS316, some modifications of this analysis were incorporated in the uncertainty analysis.

C-4. UNCERTAINTY ANALYSIS

Many parameters affect the overall uncertainty in the calculated inventory that is contained within the radioactive stainless steel shipped from INTEC to the RWMC. The most obvious items are discussed in the following seven uncertainty factors.

The first factor is the uncertainty associated with the basic computer code results. This includes such things as the reactor flux (for the specific hardware item), the cross-section and decay library data, and the uncertainties that are related to the numerical solution of the differential equations. The uncertainty in the computer code results is estimated to range from a minimum value of $\pm 10\%$ (e.g., a factor of 1.1) to a typical uncertainty value of $\pm 50\%$ (e.g., a factor of 1.5), at zero decay-time.

The second factor is the uncertainty associated with the elemental composition of stainless steel. This will vary depending upon the given isotope, and if it represents a principal or trace element. The estimated uncertainty in the elemental constituents making up SS304 are shown in Table C-3. However, the elements of greatest concern are those elements that activate into the following radionuclides: C-14 (i.e., N), Cl-36 (i.e., Cl), Ni-59 and Ni-63 (i.e., Ni), Nb-94 (i.e., Nb), and Tc-99 (i.e., Mo). The maximum uncertainty associated with these five precursor elements is 185% (due to Cl); however, an average uncertainty of $\pm 65\%$ may be a more reasonable value when considering the impact from all elements; especially since very little chlorine is actually present in stainless steel. In any case, in the overall uncertainty analysis, an average composition uncertainty of $\pm 65\%$ (e.g., a factor of 1.65) is assumed below.

The third factor is the uncertainty associated with the assumed irradiation history. Since it was not practical to follow the detailed irradiation history of each of the 561 subassemblies sent to INTEC, it was assumed that all subassemblies were irradiated to their maximum allowed burnup limits. For example, for Mark-I assemblies this limit was 1.7 atom-%, and for Mark-II assemblies, this was ~ 8.0 atom-%. For the Mark-II assemblies, this burnup limit corresponded to a maximum neutron fluence was 9.3×10^{22} nvt (or a total neutron flux of 3.77×10^{15} n/cm²/s (at an EBR-II thermal power of 62.5 MW) for 285.5 days. Since a maximum irradiation history was modeled in the computer code calculations, no further uncertainty value is needed here.

A fourth factor is the uncertainty associated with the total mass of steel contained within each driver subassembly. The amount of steel contained within each subassembly can vary due to machining variability and other design changes. Based on differently reported weights for a Mark-II subassembly, the estimated uncertainty associated with the total stainless steel mass for each subassembly is expected to be around $\pm 10\%$.

A fifth factor is the uncertainty associated with the stainless steel alloy composition. Most of the subassemblies that were shipped to INTEC were Mark-IA assemblies that were made entirely from SS304; however, it is likely that some components from a few Mark-II subassemblies were made from SS316. Although the major alloying elements can vary somewhat from SS304 to SS316 (e.g., Mo varies from 0.37 wt% in SS304 to 2.4 wt% in SS316), most of the trace element compositions are expected to be similar. Based on the fact that 65 Mark-II and ~ 496 Mark-IA complete subassemblies were sent to

INTEC for reprocessing, and assuming 100% of the Mark-IA subassemblies were made from SS304, and 50% of the Mark-II assemblies were made from SS316, then it can be estimated that ~6% of the total steel delivered to INTEC was SS316 and 94% was SS304. The maximum element variability between SS304 and SS316, affecting the radionuclides of concern, results from molybdenum (Mo). For example, Mo-98 is the main precursor of Tc-99. The average Mo concentration in a 94/6 mixture of SS304 and SS316 is: 94% of 0.37 wt% (in SS304) + 6% of 2.4 wt% (in SS316) = 0.492 wt% (average); instead of the nominal value of 0.37 wt% which was used in the base case analysis (e.g., the SS304 case). Therefore, $1.33 = 0.492 \text{ wt\%} / 0.37 \text{ wt\%}$, or $\pm 33\%$ is the corresponding uncertainty value. In comparison, for Ni, the maximum uncertainty factor is: $1.016 (= [94\% \text{ of } 9.23 \text{ wt\%} + 6\% \text{ of } 11.75 \text{ wt\%}] \text{ divided by } 9.23 \text{ wt\%})$. An uncertainty value of $\pm 33\%$ represents a maximum variability between the most important precursor elements comprising SS304 and SS316 (e.g., those elements leading to the production of C-14, Cl-36, Ni-59, Ni-63, or Tc-99).

A sixth factor represents the uncertainty in the number of complete EBR-II subassemblies that were actually processed at INTEC. Based on INTEC records, it appears that at least 567 EBR-II subassemblies were processed; however, based on ANL-W shipping records, only 561 EBR-II subassemblies can be identified as actually being shipped to INTEC. Since the best-estimate analysis is based on 561 subassemblies, the estimated uncertainty in this item is $\pm 1\%$ (e.g., $1.01 = 567/561$).

A seventh and final factor involves the number of complete subassemblies that were dissolved at INTEC instead of being disassembled. It is known that during the first reprocessing campaign a small number (the exact number being unknown) of EBR-II subassemblies were dissolved and not disassembled. In this situation, the activation products contained within the subassembly steel ended up in the calcine wastes and therefore was not sent to the RWMC as subassembly hardware wastes. Since the number of subassemblies that were dissolved is not known, for the best-estimate analysis, it was assumed that no complete subassemblies were dissolved and that all of the stainless steel hardware from INTEC reprocessing activities on EBR-II subassemblies was sent to the RWMC for disposal. This scenario represents a slightly conservative assumption. Therefore, the uncertainty factor associated with this situation is assumed to be $\pm 0\%$.

Applying the seven individual uncertainty factors that are mentioned above, the total uncertainty associated with the calculated radionuclide activities is estimated to be about a factor of 2 (e.g., 1.89, where $\pm 89\% = \sqrt{[0.5^2 + 0.65^2 + 0.0^2 + 0.10^2 + 0.33^2 + 0.01^2 + 0.0^2]}$).

C-5. COMPARISON OF CALCULATED RESULTS TO THE RWMIS DATA

It is difficult to make a direct correspondence between the calculated inventory contained within the EBR-II activated subassembly hardware and the reported inventory data corresponding to activated metal that was sent to the SDA from INTEC. One problem is not all of the important radionuclides of concern were reported in the waste shipment records (or equivalently in the RWMIS database). In general, the only radionuclide that can be directly compared is Co-60. A second problem is that hardware processed in one year at INTEC may have been retained for several years before it was physically shipped to the SDA (or RWMC). Therefore, a waste that was generated in one year may not have been disposed of in the same year that it was processed. A third problem is that the information contained in the RWMIS records (or the shipping manifests) may not be accurate (e.g., not only for total activity numbers or individual radionuclides, but also the reported mass and description of waste that was disposed). For example, although the RWMIS records indicate a large shipment of activated metal to the RWMC from INTEC in 1973, and this waste is identified as "FUEL END BOXES EBR-II", similar shipments in later years should have occurred (based on INTEC reprocessing campaigns involving EBR-II fuel) but similar

descriptions cannot be found in the shipping records. Furthermore, the RWMIS database indicates that 13 identical shipments of EBR-II hardware were shipped in 1973, a situation that is highly unlikely. Therefore, it is difficult to make a one-to-one correspondence between the amount and times when certain pieces of hardware were processed at INTEC and when shipments of activated metal wastes were actually shipped to the SDA. In any case, a brief comparison is made in Table C-6 between the calculated and reported data.

Table C-1. Extracts from the four INTEC electrolytic dissolution campaigns.

Dates	Amount of Uranium Recovered	Summary of Activities
Campaign #1 January 1973 – April 1973	1,548 kg	Processed 159 Mark IA fuel subassembly sections containing 838 kg of U, 436 kg type 304 SS, 45 kg fissium (Mo, Ru, Rh, Pd, Zr, and Nb), and 10 kg Na. Each Mark IA subassembly initially contained 5.62 kg U enriched to 52.6%. Burnup on this fuel was ~1%. In addition, 273 aluminum cans containing 710 kg of U or equivalently ~11,500 EBR-II fuel pins were processed.
Campaign #2 February 1975 – April 1976	1,608 + 650 + 60 + 142 = 2,460 kg	Processed 314 subassemblies (SAs) of which 230 were Mark IA SAs and 84 were control SAs. The Mark IA SAs contained 5.62 kg of U each, and the control SAs contained 3.76 kg of U each. Also, 650 kg of U from 231 aluminum cans containing ~10,500 EBR-II fuel pins, and 60 kg from 90 cans of skull oxide were dissolved. Finally, some 142 kg of U from miscellaneous sources were dissolved during the second campaign.
Campaign #3 August 1977 – September 1977	~454 kg	Processed 29 Mark IA and 65 Mark II subassemblies. The Mark IA SAs contained 5.62 kg of U each and the Mark II SAs contained 4.47 kg of U each. The total number of fuel pins that were processed is estimated at 8,554.
Campaign #4 August 1981 – March 1982	~826 kg	Dissolved 1,436 canisters of Mark IA and Mark II fuel elements. The total number of fuel pins that were dissolved is estimated to be ~15,500 (note: 91 elements were normally contained in 8 or 9 canisters, or approximately 11 elements per canister).
Total =	~5,288 kg	Processed a total of 567 complete EBR-II SAs (e.g., 159+314+29+65). 5,288 kg of U is equivalent to an uranium mass contained in ~87,000 EBR-II fuel pins (~90% Mark IA fuel and ~10% Mark II fuel with an average U mass of 0.0605 kg/pin).

Table C-2. The subassembly mass and the computer calculated radionuclide inventory (curies) contained within the stainless steel hardware of several EBR-II subassemblies at various core locations.

Subassembly Core Location	Steel Mass (g)	C-14 14C	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	Nb-94 (Ci)	Tc-99 (Ci)
Mark-I in Row 4	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
Mark-I in Row 6	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
Mark-II in Row 4	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
Mark-II in Row 6	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
Mark-III in Row 4	17,507	1.35E-02	9.59E-06	7.78E+02	5.54E-02	4.15E+00	2.80E-03	1.37E-03
Mark-III in Row 6	17,507	1.39E-02	4.48E-06	8.48E+02	6.11E-02	4.64E+00	3.18E-03	1.55E-03
Reflector in Row 1	36,447	4.97E-02	1.02E-06	2.07E+03	3.06E-01	2.19E+01	1.66E-02	7.21E-03
Reflector in Row 7	36,447	4.93E-02	8.04E-06	1.81E+03	1.85E-01	1.29E+01	9.15E-03	4.09E-03
Reflector in Row 8	36,447	5.19E-02	5.46E-06	2.60E+03	2.40E-01	1.77E+01	1.30E-02	5.92E-03
Reflector in Row 9	36,447	5.34E-02	1.96E-06	2.90E+03	2.88E-01	2.19E+01	1.63E-02	7.40E-03
Experimental in Row 4	8,027	5.50E-03	3.92E-06	1.83E+02	1.72E-02	1.22E+00	7.68E-04	3.64E-04
K-Type subassembly	33,398	4.45E-02	9.15E-07	1.11E+03	1.28E-01	8.56E+00	5.63E-03	2.49E-03
Thimble subassembly	6,397	5.02E-03	3.58E-06	2.18E+02	1.78E-02	1.29E+00	8.50E-04	4.06E-04
Control Rod Driver in Row 4	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03

Table C-3. Average or typical concentration values for those elements that occur in SS304.

Symbol	Element Name	No.	Atomic Weight	Concentration (ppm by wt)	Average	Estimated Uncertainty ^a	Main Reference Source
H	hydrogen	1	1.0079	7.00	—	—	SS304 impurity, Moghissi ^a
He	helium	2	4.0026	0.00	—	—	—
Li	lithium	3	6.9410	0.13	—	—	SS304 data Table 4.8, p. 45, Evans
Be	beryllium	4	9.0122	0.00	—	—	—
B	boron	5	10.8110	5.00	—	—	SS304 impurity, Moghissi ^b
C	carbon	6	12.0110	800.00	±14%	—	Primary element 0.08%, p. 189 ASM Metals
N	nitrogen	7	14.0067	470.00	±23%	—	Carboneau ^b
O	oxygen	8	15.9994	150.00	—	—	SS304 impurity, Moghissi ^b
F	fluorine	9	18.9984	0.00	—	—	—
Ne	neon	10	20.1797	0.00	—	—	—
Na	sodium	11	22.9898	9.70	±126%	—	SS304 data Table 4.8, p. 45, Evans
Mg	magnesium	12	24.3050	0.00	—	—	—
Al	aluminum	13	26.9815	100.00	±100%	—	SS304 impurity, Moghissi ^b
Si	silicon	14	28.0855	10,000.00	—	—	Primary element 1.0%, p. 189 ASM Metals
P	phosphorus	15	30.9738	450.00	—	—	Primary element 0.045%, p. 189 ASM Metals
S	sulfur	16	32.0660	300.00	—	—	Primary element 0.03%, p. 189 ASM Metals
Cl	chlorine	17	35.4527	70.00	±185%	—	SS304 data Table 4.8, p. 45, Evans
Ar	argon	18	39.9480	0.00	—	—	—
K	potassium	19	39.0983	3.00	—	—	SS304 data Table 4.8, p. 45, Evans
Ca	calcium	20	40.0780	19.00	—	—	SS304 data Table 4.8, p. 45, Evans
Sc	scandium	21	44.9559	0.03	—	—	SS304 data Table 4.8, p. 45, Evans
Ti	titanium	22	47.8800	600.00	—	—	SS304 data Table 4.8, p. 45, Evans

Table C-3. (continued).

Symbol	Element Name	No.	Atomic Weight	Average Concentration (ppm by wt)	Estimated Uncertainty ^a	Main Reference Source
V	vanadium	23	50.9415	500.00	±50%	SS304 impurity, Moghissi ^b
Cr	chromium	24	51.9961	187,800.00	±2%	Primary element 18.78%, Carboneau ^b
Mn	manganese	25	54.9381	14,100.00	±26%	Primary element 1.41%, Carboneau ^b
Fe	iron	26	55.8470	682,449.30	±4%	Balance of the alloy
Co	cobalt	27	58.9332	1,700.00	±65%	Carboneau ^b
Ni	nickel	28	58.6900	92,300.00	±7%	Primary element 9.23%, Carboneau ^b
Cu	copper	29	63.5460	2,500.00	±74%	Carboneau ^b
Zn	zinc	30	65.3900	100.00	±157%	SS304 impurity, Moghissi ^b
Ga	gallium	31	69.7230	129.00	±90%	SS304 data Table 4.8, p. 45, Evans
Ge	germanium	32	72.6100	0.00	—	—
As	arsenic	33	74.9216	100.00	±168%	SS304 impurity, Moghissi ^b
Se	selenium	34	78.9600	200.00	±200%	SS304 impurity, Moghissi ^b
Br	bromine	35	79.9040	2.00	±400%	SS304 data Table 4.8, p. 45, Evans
Kr	krypton	36	83.8000	0.00	—	—
Rb	rubidium	37	85.4678	10.00	—	SS304 data Table 4.8, p. 45, Evans
Sr	strontium	38	87.6200	0.20	—	SS304 data Table 4.8, p. 45, Evans
Y	yttrium	39	88.9059	5.00	—	SS304 data Table 4.8, p. 45, Evans
Zr	zirconium	40	91.2240	10.00	±200%	SS304 data Table 4.8, p. 45, Evans
Nb	niobium	41	92.9064	120.00	±67%	Carboneau ^b
Mo	molybdenum	42	95.9400	3,700.00	±43%	Carboneau ^b
Tc	technetium	43	98.9062	0.00	—	—
Ru	ruthenium	44	101.0700	0.00	—	—
Rh	rhodium	45	102.9055	0.00	—	—
Pd	palladium	46	106.4200	0.00	—	—
Ag	silver	47	107.8682	2.00	—	SS304 data Table 4.8, p. 45, Evans
Cd	cadmium	48	112.4110	0.00	—	SS304 impurity, Moghissi ^b
In	indium	49	114.8200	0.00	—	—
Sn	tin	50	118.7100	100.00	—	SS304 impurity, Moghissi ^b
Sb	antimony	51	121.7500	100.00	±31%	SS304 impurity, Moghissi ^b
Te	tellurium	52	127.6000	0.00	—	—
I	iodine	53	126.9045	0.00	—	—
Xe	xenon	54	131.2900	0.00	—	—
Cs	cesium	55	132.9054	0.30	—	SS304 data Table 4.8, p. 45, Evans
Ba	barium	56	137.3270	500.00	—	SS304 data Table 4.8, p. 45, Evans
La	lanthanum	57	138.9055	0.20	±1,000%	SS304 data Table 4.8, p. 45, Evans
Ce	cerium	58	140.1150	371.00	±57%	SS304 data Table 4.8, p. 45, Evans
Pr	praseodymium	59	140.9077	0.00	—	—
Nd	neodymium	60	144.2400	0.00	—	—
Pm	promethium	61	144.9145	0.00	—	—
Sm	samarium	62	150.3600	0.10	±150%	SS304 data Table 4.8, p. 45, Evans
Eu	europlium	63	151.9650	0.02	—	SS304 data Table 4.8, p. 45, Evans
Gd	gadolinium	64	157.2500	0.00	—	—

Table C-3. (continued).

Symbol	Element Name	No.	Atomic Weight	Average Concentration (ppm by wt)	Estimated Uncertainty ^a	Main Reference Source
Tb	terbium	65	158.9253	0.47	±53%	SS304 data Table 4.8, p. 45, Evans
Dy	dysprosium	66	162.5000	1.00	—	SS304 data Table 4.8, p. 45, Evans
Ho	holmium	67	164.9303	1.00	—	SS304 data Table 4.8, p. 45, Evans
Er	erbium	68	167.2600	0.00	—	—
Tm	thulium	69	168.9342	0.00	—	—
Yb	ytterbium	70	173.0400	2.00	—	SS304 data Table 4.8, p. 45, Evans
Lu	lutetium	71	174.9670	0.80	—	SS304 data Table 4.8, p. 45, Evans
Hf	hafnium	72	178.4900	2.00	—	SS304 data Table 4.8, p. 45, Evans
Ta	tantalum	73	180.9479	0.75	—	SS304 data Table 4.8, p. 45, Evans
W	tungsten	74	183.8500	186.00	±80%	SS304 data Table 4.8, p. 45, Evans
Re	rhenium	75	186.2070	0.00	—	—
Os	osmium	76	190.2000	0.00	—	—
Ir	iridium	77	192.2200	0.00	—	—
Pt	platinum	78	195.0800	0.00	—	—
Au	gold	79	196.9665	0.00	—	—
Hg	mercury	80	200.5900	0.00	—	—
Tl	thallium	81	204.3833	0.00	—	—
Pb	lead	82	207.2000	20.00	±75%	SS304 impurity, Moghissi ^b
Bi	bismuth	83	208.9804	0.00	—	—
Po	polonium	84	—	0.00	—	—
At	astatine	85	—	0.00	—	—
Rn	radon	86	—	0.00	—	—
Fr	francium	87	—	0.00	—	—
Ra	radium	88	—	0.00	—	—
Ac	actinium	89	—	0.00	—	—
Th	thorium	90	232.0381	1.00	—	SS304 data Table 4.8, p. 45, Evans
Pa	protactinium	91	—	0.00	—	—
U	uranium	92	238.0289	2.00	—	SS304 data Table 4.8, p. 45, Evans
Np	neptunium	93	—	0.00	—	—
Pu	plutonium	94	—	0.00	—	—
Am	americium	95	—	0.00	—	—
		Totals =		1,000,000.00		

a. The relative standard deviation is expressed as a percentage of the average value. Uncertainty values larger than 100% are interpreted as factors producing a possible range of values. For example, for Zr with a $\mu = 10$ ppm and a $\sigma = 200\%$, then the actual Zr concentration should range from 5 ppm ($= 10/200\%$) to 20 ppm ($= 10+200\%$) with a typical value of 10 ppm.

b. Obtained from the C. L. Trybus (ANL-W) letter listed in Appendix B of Carboneau (MLC-01-98).

Table C-4. A yearly summary of the radionuclide inventory contained within the EBR-II subassembly steel that was sent to INTEC as a function of the EBR-II shipment date. Isotope half-lives (in years) are listed on the second row of the title descriptions.

EBR-II Shipment Date	No. SAs	Steel Mass (g)	C-14 (Ci) 5.73E+03 y	Cl-36 (Ci) 3.01E+05 y	Co-60 (Ci) 5.27E+00 y	Ni-59 (Ci) 7.60E+04 y	Ni-63 (Ci) 1.00E+02 y	Nb-94 (Ci) 2.00E+04 y	Tc-99 (Ci) 2.13E+05 y
1969	29	446,282	9.92E-02	5.39E-05	6.40E+03	4.36E-01	3.25E+01	2.27E-02	1.10E-02
1970	72	1,134,277	2.90E-01	1.49E-04	1.88E+04	1.28E+00	9.55E+01	6.67E-02	3.24E-02
1971	78	1,149,744	1.81E-01	9.99E-05	1.17E+04	7.94E-01	5.91E+01	4.13E-02	2.00E-02
1972	78	1,159,091	1.96E-01	1.11E-04	1.26E+04	8.57E-01	6.38E+01	4.45E-02	2.16E-02
1973	113	1,704,958	3.28E-01	1.85E-04	2.11E+04	1.44E+00	1.07E+02	7.47E-02	3.63E-02
1974	69	1,177,920	3.95E-01	2.24E-04	2.54E+04	1.73E+00	1.29E+02	8.99E-02	4.36E-02
1975	56	1,025,932	4.55E-01	2.61E-04	2.92E+04	1.99E+00	1.48E+02	1.03E-01	5.01E-02
1976	66	1,250,988	6.16E-01	3.19E-04	3.99E+04	2.72E+00	2.03E+02	1.42E-01	6.87E-02
Total	561	9,049,192	2.56E+00	1.40E-03	1.65E+05	1.12E+01	8.37E+02	5.85E-01	2.84E-01

Table C-5. Summary of the radionuclide inventory contained within the EBR-II subassembly steel that was processed at INTEC during the several EBR-II reprocessing campaigns. Isotope half-lives (shown in years) are listed on the second row of this table.

INTEC Processing Dates	INTEC Processing Campaign	No. of SAS ^a	Steel Processed (g)	C-14 5,730 y (Ci)	Cl-36 301,000 y (Ci)	Co-60 5.27 y (Ci)	Ni-59 76,000 y (Ci)	Ni-63 100 y (Ci)	Nb-94 20,000 y (Ci)	Tc-99 213,000 y (Ci)
1973	1	159	2,406,278	4.74E-01	2.56E-04	3.06E+04	2.08E+00	1.55E+02	1.08E-01	5.26E-02
1975-1976	2	314	5,030607	1.36E+00	7.66E-04	8.76E+04	5.97E+00	4.44E+02	3.10E-01	1.50E-01
1977	3	88	1,612,306	7.25E-01	3.81E-04	4.69E+04	3.19E+00	2.38E+02	1.66E-01	8.08E-02
1981-1982	4	0 ^b	—	—	—	—	—	—	—	—
Totals		561	9,049,192	2.56E+00	1.40E-03	1.65E+05	1.12E+01	8.37E+02	5.85E-01	2.84E-01

a. INTEC records indicate that at least 567 EBR-II subassemblies were processed at INTEC from 1973 through 1977; however, based on EBR-II shipping records, only 561 subassemblies can be identified as actually being shipped to INTEC. INTEC records state that 94 EBR-II (29 Mark-IA and 65 Mark-II) subassemblies were processed in 1977. In order to make the total number of processed subassemblies match the 561 figure that is known to have been shipped to INTEC, a value of 88 was assumed for 1977 instead of the INTEC reported figure of 94. The variation in the number of subassemblies that were processed at INTEC is incorporated in the uncertainty analysis.

b. The EBR-II fuel that was reprocessed at INTEC during Campaign 4 consisted of uranium fissium alloy in stainless steel cladding. A total of 1,436 canisters of Mark-IA and Mark-II fuel elements were dissolved. However, it appears that no complete (e.g., intact) subassemblies were processed during Campaign 4; and therefore, it is assumed that no subassembly hardware waste was generated during this last reprocessing campaign. All of the stainless steel cladding that was dissolved during Campaign 4 went into the calcine wastes that are being stored at INTEC.

Notes: The calculated inventories produced during the INTEC processing dates were determined as follows: For the year 1973, 159 EBR-II subassemblies (61.9%) were processed at INTEC from a total number of 257 subassemblies that had been previously shipped from ANL-W to INTEC (1969-1972). Therefore, for 1973, the calculated inventory shipped to the RWMC was determined to be 159/257 (61.9%) times the previous inventory shipped to INTEC. For the 1975-1976 period, 314 subassemblies were processed. The estimated number of subassemblies on hand at INTEC was 336 (98 from the previous time period plus 238 that were shipped there during 1973-1975 time period). Hence, it is assumed that 98 subassemblies (or 31.8%) from the 1969-1972 shipping period plus 216 subassemblies (or 90.8%) from the 1973-1975 time period were processed. The corresponding inventory in the processed steel for 1975-1976 was computed based on the following formula: 31.8% of the 1969-1972 inventory plus 90.8% of the 1973-1975 inventory. After the second dissolution campaign (1975-1976), ~22 unprocessed subassemblies (9.2%) must have remained at INTEC from previous shipping periods. During 1977, it is believed that all of the previous 22 unprocessed subassemblies plus 66 additional subassemblies from the 1976 shipment were then processed. Therefore, the calculated inventories for 1977 were based on these ratios and are summarized as follows: 9.2% of the 1973-1975 inventory plus 100% of the 1976 inventory.

Table C-6. Comparison of the calculated and reported (RWMIS) inventory contained within the EBR-II subassembly steel that was processed at INTEC during the several EBR-II reprocessing campaigns. Isotope half-lives (shown in years) are listed on the second row of the title descriptions.

INTEC Dates ^a	Description	Disposal Location	Mass ^b (g)	Gross Activity (Ci)	C-14 5,730 y (Ci)	Cl-36 301,000 y (Ci)	Co-60 5.27 y (Ci)	Ni-59 76,000 y (Ci)	Ni-63 100 y (Ci)	Nb-94 20,000 y (Ci)	Tc-99 213,000 y (Ci)
Calculated data:											
1973	Campaign 1	—	2,406,278	—	0.474	0.000256	30,600	2.08	155.	0.108	0.053
1975-1976	Campaign 2	—	5,030,607	—	1.360	0.000766	87,600	5.97	444.	0.310	0.150
1977	Campaign 3	—	1,612,306	—	0.725	0.000381	46,900	3.19	238.	0.166	0.081
1981-1982	Campaign 4	—	0	—	0.000	0.000000	0	0.00	0	0.000	0.000
	Totals =		9,049,192	—	2.560	0.001400	165,000	11.20	837.	0.585	0.284
RWMIS data:											
9/7/73 through 11/7/73	12 identical shipments of EBR-II Fuel End Boxes	See Note c below	8,845,200	325,000	—	—	198,250	—	—	—	—
10/13/75	Activated metal	BGP1550W900SNE	998,000	3,692	—	—	2,216	—	—	—	—
7/6/77	Can Top Reflector	BGP1550W650SNE	1,043,000	475	—	—	3	—	—	—	—
11/30/81	Filter cask EBR2	SVR100+85	16,420,000	140,000	—	—	140	—	—	—	—
5/5/82 through 7/28/82	10 shipments NON COMP	See Note d below	5,443,000	114,800	—	—	1,148	—	—	—	—
	Totals =		33,749,200	583,967	—	—	201,757	—	—	—	—

a. The process date is written as a complete year (e.g., 1973). The SDA disposal dates are written as: MM/DD/YY.

b. The masses shown for the calculated data represent the estimated weight of stainless steel hardware. The masses shown for the reported RWMIS data represent gross weights, and may include materials other than stainless steel. Therefore, the reported masses should be larger than the calculated weights.

c. The 12 identical shipments were buried at the following locations: 2 at BGT574+90-5, 1 at BGT575+00-1, 1 at BGT575+25-3, 1 at BGT575+15-2, 2 at BGT575+50-6, 2 at BGT575+60-7, 1 at BGT575+75-8, 1 at BGT576+40-5, and 1 at BGT576+45-5.

d. The 10 Soil Vault disposals were made to the following SDA locations: SVR121+32, SVR121+22, SVR120+85, SVR120+75, SVR120+65, SVR120+55, SVR120+55, SVR120+20, and 2 at SVR120+10.

Table C-7. Best-estimate inventory (Ci) contained within the irradiated stainless steel wastes generated at INTEC during the reprocessing of EBR-II subassembly fuel and then buried at the SDA.

Isotope	Half-life (years)	Activity for estimated shipment dates of hardware to the SDA					
		1973 (Ci)	1975 (Ci)	1977 (Ci)	1981 (Ci)	1982 (Ci)	Total (Ci)
H-3	1.23E+01	—	—	—	—	—	—
Be-10	1.60E+06	—	—	—	—	—	—
C-14	5.73E+03	4.74E-01	6.80E-01	6.80E-01	3.63E-01	3.63E-01	2.56E+00
Cl-36	3.01E+05	2.56E-04	3.83E-04	3.83E-04	1.91E-04	1.91E-04	1.40E-03
Co-60	5.27E+00	3.06E+04	4.38E+04	4.38E+04	2.35E+04	2.35E+04	1.65E+05
Ni-59	7.60E+04	2.08E+00	2.99E+00	2.99E+00	1.60E+00	1.60E+00	1.13E+01
Ni-63	1.00E+02	1.55E+02	2.22E+02	2.22E+02	1.19E+02	1.19E+02	8.37E+02
Nb-94	2.00E+04	1.08E-01	1.55E-01	1.55E-01	8.30E-02	8.30E-02	5.85E-01
Tc-99	2.13E+05	5.30E-02	7.50E-02	7.50E-02	4.05E-02	4.05E-02	2.84E-01
Total (Ci)		3.08E+04	4.40E+04	4.40E+04	2.36E+04	2.36E+04	1.66E+05
Assumptions:	See Note a below	See Note b below	See Note c below	See Note c below	See Note c below	See Note c below	

a. All of the actinide inventory that was sent to INTEC in 1973 from EBR-II (see Table C-5 or C-6) is assumed to have been shipped and buried at the SDA in 1973.

b. It is not known how much of the activated hardware that was processed at INTEC during the second electrolytic dissolution campaign (e.g., 1975-1976) was sent to the SDA in 1975 or in subsequent years. However, based on RWMIS data, it is indicated that no activated metal was sent to the SDA in 1976. For this table, it was assumed that 50% of the 1975-1976 inventory from Campaign 2 was sent to the SDA in 1975 and 50% was sent to the SDA in 1977.

c. Subassemblies were processed at INTEC in 1977 (Campaign 3). For the purposes of this table, it is assumed that all of the stainless steel waste that was produced in 1977 was sent to the SDA in 1981 and 1982. Furthermore, it is assumed that 50% of the wastes generated during Campaign 3 were sent to the SDA in 1981, and 50% were sent in 1982. No credit for decay while these wastes were held at INTEC was calculated for this table.

Table C-8. Best-estimate inventory (Ci) contained within EBR-II subassemblies shipped to INTEC (does not include the fuel activity).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
1	2/19/69	C-2052	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
2	2/19/69	C-2040	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
3	2/19/69	C-2043	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
4	2/19/69	B-385	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
5	2/19/69	B-373	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
6	2/19/69	B-365	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
7	2/19/69	B-371	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
8	2/27/69	C-2118	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
9	3/4/69	C-2061	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
10	4/15/69	C-2116	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
11	5/19/69	C-2006	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
12	6/24/69	C-2106	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
13	7/24/69	L-471	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
14	9/2/69	C-2076	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
15	9/2/69	C-2075	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
16	9/2/69	C-2074	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
17	9/30/69	C-2087	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
18	9/30/69	C-2097	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
19	9/30/69	C-2079	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
20	9/30/69	B-3054	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
21	9/30/69	L-475	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
22	10/1/69	L-478	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
23	10/1/69	B-3051	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
24	10/1/69	C-2095	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
25	10/1/69	L-479	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
26	10/1/69	L-474	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
27	12/29/69	L-477	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
28	12/29/69	C-2099	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
29	12/29/69	L-476	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
			Subtotal for 1969 =	446,282	9.92E-02	5.39E-05	6.40E+03	4.36E-01	3.25E+01	2.27E-02	1.10E-02
30	1/5/70	C-2102	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
31	1/8/70	B-3061	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
32	1/8/70	B-3062	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
33	1/8/70	C-2010	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
34	1/26/70	L-4070	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
35	1/27/70	C-2098	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
36	1/27/70	C-2179	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
37	1/27/70	C-2117	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
38	2/27/70	B-3063	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
39	2/27/70	L-481	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
40	2/27/70	B-3055	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
41	2/27/70	C-2126	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
42	2/27/70	L-482	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
43	3/27/70	C-2131	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
44	3/27/70	C-2105	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
45	3/27/70	B-3065	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
46	3/27/70	C-2089	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
47	4/1/70	L-480	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
48	4/1/70	L-483	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
49	4/1/70	C-2083	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
50	4/1/70	C-2115	Core driver	14,261	7.42E-04	5.29E-07	4.64E+01	3.17E-03	2.35E-01	1.63E-04	7.91E-05
51	4/1/70	C-2153	Core driver	14,261	7.42E-04	5.29E-07	4.64E+01	3.17E-03	2.35E-01	1.63E-04	7.91E-05
52	4/1/70	C-2090	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
53	4/22/70	L-484	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
54	4/24/70	L-487	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
55	4/24/70	B-391	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
56	5/11/70	B-3053	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
57	5/11/70	B-3031	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
58	5/11/70	L-489	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
59	5/11/70	B-3059	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
60	6/19/70	L-486	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
61	6/19/70	B-396	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
62	6/19/70	L-492	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
63	6/19/70	L-488	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
64	6/19/70	L-493	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
65	6/19/70	L-490	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
66	6/19/70	B-393	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
67	6/26/70	B-3068	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
68	6/26/70	B-3066	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
69	6/26/70	B-3067	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
70	7/13/70	C-2009	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
71	7/13/70	B-3069	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
72	7/13/70	B-398	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
73	7/13/70	B-399	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
74	8/1/70	B-3026	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
75	8/1/70	C-2091	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
76	8/1/70	C-2096	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
77	9/1/70	L-494	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
78	9/1/70	C-2125	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
79	9/1/70	C-2254	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
80	9/1/70	L-491	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
81	9/1/70	C-2142	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
82	9/24/70	C-2192	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
83	9/24/70	C-2207	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
84	10/6/70	C-2149	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
85	10/6/70	L-496	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
86	10/6/70	L-495	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
87	10/6/70	L-4001	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
88	10/27/70	C-2143	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
89	10/27/70	B-3028	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
90	10/27/70	B-3075	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
91	10/27/70	B-3052	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
92	10/27/70	B-3117	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
93	10/27/70	C-2140	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
94	11/16/70	C-2012	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
95	11/16/70	L-4003	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
96	11/16/70	L-4006	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
97	11/16/70	B-3118	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
98	11/16/70	L-4004	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
99	11/23/70	L-4002	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
100	11/23/70	L-4005	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
101	11/23/70	C-2146	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
Subtotal for 1970 =				1,134,277	2.90E-01	1.49E-04	1.88E+04	1.28E+00	9.55E+01	6.67E-02	3.24E-02

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
102	3/29/71	C-2144	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
103	3/29/71	C-2150	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
104	3/29/71	C-2152	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
105	3/29/71	B-3123	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
106	3/29/71	C-2016	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
107	4/9/71	B-3101	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
108	4/29/71	C-2158	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
109	4/29/71	B-3125	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
110	4/29/71	C-2161	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
111	4/29/71	C-2160	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
112	4/29/71	B-3119	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
113	4/29/71	C-2017	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
114	4/29/71	B-3104	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
115	4/29/71	C-2018	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
116	4/29/71	C-2013	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
117	6/9/71	C-2276	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
118	6/9/71	C-2269	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
119	6/29/71	B-3106	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
120	6/29/71	B-3109	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
121	6/29/71	C-2273	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
122	6/29/71	L-4023	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
123	6/29/71	L-4020	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
124	6/29/71	C-2278	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
125	7/29/71	L-4021	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
126	7/29/71	L-4024	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
127	7/29/71	C-2014	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
128	7/29/71	B-3110	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
129	7/29/71	B-3002	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
130	8/31/71	B-3115	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
131	8/31/71	L-4022	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
132	8/31/71	L-4026	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
133	8/31/71	L-4028	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
134	8/31/71	L-4027	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
135	8/31/71	B-3116	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
136	9/17/71	C-2291	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
137	9/17/71	B-3107	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
138	9/17/71	C-2293	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
139	9/17/71	C-2286	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
140	9/17/71	B-3113	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
141	9/17/71	B-3108	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
142	9/17/71	C-2287	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
143	9/17/71	C-2304	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
144	9/29/71	C-2284	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
145	9/29/71	C-2258	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
146	9/29/71	C-2290	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
147	10/15/71	C-2299	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
148	10/15/71	C-2279	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
149	10/15/71	C-2292	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
150	10/15/71	B-3136	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
151	10/15/71	C-2289	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
152	10/15/71	B-3114	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
153	10/15/71	C-2288	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
154	10/15/71	B-3137	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
155	10/15/71	B-3134	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
156	10/28/71	C-2285	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
157	10/28/71	C-2318D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
158	10/28/71	C-2301	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
159	11/19/71	B-3130	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
160	11/19/71	B-3127	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
161	11/19/71	C-2314	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
162	11/19/71	B-3126	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
163	11/19/71	C-2307	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
164	11/19/71	B-3111	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
165	11/19/71	C-2308	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
166	11/19/71	C-2306	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
167	11/30/71	C-2311	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
168	11/30/71	C-2303	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
169	11/30/71	C-2280	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
170	11/30/71	C-2310	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
171	12/7/71	B-3112	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
172	12/7/71	C-2294	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
173	12/7/71	C-2317	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
174	12/7/71	C-2309	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
175	12/20/71	C-2322D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
176	12/20/71	C-2305	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
177	12/20/71	C-2327	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
178	12/20/71	C-2313	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
179	12/20/71	C-2300	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
			Subtotal for 1971 =	1,149,744	1.81E-01	9.99E-05	1.17E+04	7.94E-01	5.91E+01	4.13E-02	2.00E-02
180	1/3/72	B-3129	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
181	1/3/72	C-2281	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
182	1/3/72	C-2316	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
183	1/3/72	B-3001	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
184	1/18/72	L-4029	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
185	1/18/72	C-2326	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
186	1/18/72	L-485	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
187	1/18/72	C-2315	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
188	2/2/72	C-2328	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
189	2/2/72	B-3128	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
190	2/2/72	C-2334	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
191	2/2/72	C-2302	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
192	2/9/72	C-2296	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
193	2/9/72	C-2331	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
194	2/9/72	B-3131	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
195	2/9/72	C-2330	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
196	2/9/72	C-2329	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
197	2/9/72	C-2337	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
198	2/29/72	C-2332	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
199	2/29/72	C-2324D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
200	2/29/72	B-3159D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
201	2/29/72	C-2323D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
202	2/29/72	B-3158D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
203	3/15/72	L-4032	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
204	3/15/72	C-2333	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
205	3/15/72	L-4031	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
206	3/31/72	C-2342	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
207	3/31/72	C-2341	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
208	3/31/72	C-2335	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
209	3/31/72	C-2338	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
210	3/31/72	C-2340	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
211	3/31/72	B-3140	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
212	4/13/72	B-3141	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
213	4/13/72	C-2021	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
214	4/13/72	C-2339	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
215	4/13/72	B-3135	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
216	4/13/72	C-2336	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
217	6/30/72	C-2348	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
218	6/30/72	B-3138	Blanket region core driver	14,261	7.71E-04	2.48E-07	5.17E+01	3.51E-03	2.64E-01	1.85E-04	9.01E-05
219	6/30/72	C-2345	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
220	6/30/72	C-2312	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
221	6/30/72	B-3149	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
222	6/30/72	B-3132	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
223	7/15/72	B-3142	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
224	7/31/72	C-2349	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
225	7/31/72	B-3148	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
226	8/15/72	C-2361	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
227	8/15/72	B-3145	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
228	8/31/72	C-2365	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
229	8/31/72	L-4035	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
230	9/29/72	L-4040	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
231	9/29/72	C-2373	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
232	9/29/72	L-4036	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
233	9/29/72	L-4037	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
234	9/29/72	L-4038	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
235	9/29/72	L-4033	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
236	10/13/72	C-2347	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
237	10/13/72	C-2023	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
238	10/31/72	C-2359	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04

C-25

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
239	10/31/72	C-2360	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
240	10/31/72	C-2354D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
241	10/31/72	C-2344	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
242	10/31/72	C-2370	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
243	10/31/72	C-2371	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
244	10/31/72	C-2022	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
245	10/31/72	C-2353D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
246	10/31/72	B-3150	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
247	11/15/72	C-2368	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
248	11/15/72	C-2385	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
249	11/15/72	C-2383	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
250	11/15/72	C-2384	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
251	12/1/72	C-2379	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
252	12/1/72	C-2386	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
253	12/1/72	C-2380	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
254	12/15/72	B-3151	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
255	12/15/72	C-2366	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
256	12/15/72	C-2372	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
257	12/15/72	C-2389	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
Subtotal for 1972 =				1,159,091	1.96E-01	1.11E-04	1.26E+04	8.57E-01	6.38E+01	4.45E-02	2.16E-02
258	1/14/73	C-2374	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
259	1/14/73	C-2357D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
260	1/15/73	L-4041	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
261	1/15/73	L-4042	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
262	1/15/73	C-2355D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
263	1/31/73	L-4048	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
264	1/31/73	L-4049	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
265	1/31/73	B-3143	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
266	1/31/73	L-4050	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
267	1/31/73	C-2367	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
268	1/31/73	B-3154	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
269	1/31/73	C-2369	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
270	1/31/73	C-2364	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
271	2/15/73	B-3157	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
272	2/15/73	C-2378	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
273	2/15/73	C-2363	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
274	2/15/73	C-2502	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
275	2/15/73	B-3003	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
276	2/15/73	C-2352D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
277	2/15/73	B-3155	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
278	2/28/73	C-2506	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
279	2/28/73	C-2388	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
280	2/28/73	C-2325D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
281	2/28/73	B-3133	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
282	2/28/73	B-3144	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
283	2/28/73	C-2381	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
284	3/15/73	B-3181	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
285	3/15/73	B-3156	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
286	3/15/73	B-3147	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
287	3/15/73	B-3164D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
288	3/15/73	B-3182	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
289	3/15/73	C-2356D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
290	3/15/73	B-3152	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
291	3/15/73	C-2504	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
292	3/28/73	B-3178	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
293	4/2/73	C-2376	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
294	4/2/73	C-2391	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
295	4/2/73	C-2393	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
296	4/2/73	B-3146	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
297	4/2/73	C-2362	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
298	4/2/73	C-2024	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
299	4/2/73	B-3153	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
300	4/2/73	C-2395	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
301	4/2/73	C-2392	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
302	4/2/73	C-2394	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
303	4/16/73	C-2375	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
304	4/16/73	C-2390	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
305	4/16/73	C-2358D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
306	4/16/73	B-3179	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
307	4/16/73	C-2396D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
308	4/16/73	C-2398D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
309	4/16/73	B-3180	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
310	4/16/73	B-3139	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
311	4/30/73	C-2397D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
312	4/30/73	C-2413	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
313	4/30/73	C-2417	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
314	4/30/73	C-2415	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
315	4/30/73	C-2414	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
316	4/30/73	B-3165D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
317	4/30/73	C-2418	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
318	5/13/73	B-3174	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
319	5/31/73	C-2419	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
320	5/31/73	C-2507	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
321	5/31/73	C-2420	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
322	5/31/73	C-2387	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
323	5/31/73	C-2416	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
324	6/19/73	L-4047	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
325	6/19/73	B-3173	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
326	6/19/73	L-4039	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
327	6/19/73	L-4043	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
328	6/19/73	L-4044	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
329	6/19/73	L-4052	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
330	6/19/73	L-4046	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
331	6/28/73	C-2377	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
332	6/28/73	L-4051	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
333	6/28/73	B-3184	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
334	6/28/73	C-2399D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
335	7/19/73	B-3004	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
336	7/19/73	B-3185	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
337	7/19/73	B-3167D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
338	7/19/73	C-2412	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
339	7/19/73	B-3177	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
340	7/19/73	C-2400D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
341	8/22/73	C-2503	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
342	9/5/73	B-3176	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
343	9/5/73	B-3183	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
344	9/5/73	B-3168D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
345	9/17/73	C-2268	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
346	9/19/73	C-2505	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
347	9/19/73	L-4045	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
348	9/19/73	B-3186	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
349	9/24/73	C-2425	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
350	9/24/73	L-4054	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
351	9/24/73	C-2423	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
352	9/28/73	C-2438	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
353	9/28/73	C-2426	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
354	9/28/73	C-2439	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
355	10/8/73	C-2424	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
356	10/8/73	C-2444	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
357	10/15/73	C-2429	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
358	10/15/73	C-2441	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
359	10/15/73	C-2427	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
360	10/23/73	C-2403D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
361	10/23/73	B-3187	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
362	10/23/73	C-2428	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
363	10/23/73	C-2430	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
364	10/23/73	C-2406D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
365	10/23/73	C-2402D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
366	12/10/73	B-3199	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
367	12/26/73	B-3197	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
368	12/26/73	B-3188	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
369	12/26/73	B-3189	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
370	12/28/73	B-3171D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
			Subtotal for 1973 =	1,704,958	3.28E-01	1.85E-04	2.11E+04	1.44E+00	1.07E+02	7.47E-02	3.63E-02
371	2/6/74	C-2577	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
372	2/11/74	L-4057	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
373	2/11/74	L-4055	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
374	2/11/74	L-4056	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
375	2/11/74	C-2401D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
376	2/11/74	L-4058	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
377	2/11/74	L-4053	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
378	2/18/74	B-3218	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
379	2/18/74	B-3217	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
380	3/18/74	C-2498H	Half-Worth	17,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
381	3/18/74	B-3191	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
382	3/26/74	C-2434	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
383	3/26/74	B-3203	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
384	3/26/74	B-3206	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
385	3/29/74	B-3200H	Half-Worth	17,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
386	3/29/74	C-2409D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
387	3/29/74	B-3201H	Half-Worth	17,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
388	4/8/74	L-4060	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
389	4/8/74	C-2408D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
390	4/8/74	C-2407D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
391	4/18/74	L-4059	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
392	8/14/74	B-3213	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
393	8/14/74	B-3198H	Half-Worth	17,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
394	9/4/74	C-2410D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
395	9/4/74	C-2496H	Half-Worth	17,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
396	9/4/74	C-2421	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
397	9/4/74	C-2457R	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
398	9/4/74	C-2499H	Half-Worth	17,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
399	9/25/74	C-2436	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
400	9/25/74	B-3208	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
401	9/25/74	B-3220	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
402	9/25/74	B-3207	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
403	9/25/74	B-3210D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
404	9/25/74	C-2437	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
405	10/4/74	C-2411D	Guide Tube	14,261	7.42E-04	5.29E-07	4.64E+01	3.17E-03	2.35E-01	1.63E-04	7.91E-05
406	10/4/74	C-2445D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
407	10/4/74	C-2448	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
408	10/4/74	C-2449D	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
409	10/4/74	B-3216	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
410	10/4/74	C-2497H	Half-Worth	17,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
411	10/9/74	L-4062	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
412	10/9/74	L-4063	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
413	10/9/74	L-4061	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
414	10/14/74	B-3245	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
415	10/14/74	C-2556	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
416	10/14/74	C-2559	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
417	10/14/74	C-2558	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
418	10/14/74	C-2557	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
419	10/18/74	C-2561S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
420	10/18/74	C-2560	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
421	10/30/74	B-3248	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
422	10/30/74	C-2563	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
423	10/30/74	B-3240	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
424	10/30/74	C-2562	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
425	10/30/74	B-3238	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
426	10/30/74	B-3241	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
427	11/12/74	C-2567	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
428	11/12/74	C-2566S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
429	11/12/74	C-2564	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
430	11/15/74	C-2568S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
431	11/15/74	C-2569S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
432	11/15/74	C-2570	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
433	12/4/74	C-2574	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
434	12/4/74	C-2572S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
435	12/4/74	C-2571	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
436	12/6/74	C-2575	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
437	12/26/74	B-3246S	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
438	12/26/74	B-3242	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
439	12/26/74	B-3244	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
			Subtotal for 1974 =	1,177,920	3.95E-01	2.24E-04	2.54E+04	1.73E+00	1.29E+02	8.99E-02	4.36E-02
440	1/6/75	C-2580	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
441	1/6/75	C-2581	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
442	1/14/75	B-3214	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
443	1/14/75	B-3209	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
444	1/14/75	C-2446	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
445	1/27/75	C-2450	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
446	1/27/75	C-2451	Core driver	14,261	1.48E-03	1.06E-06	9.29E+01	6.34E-03	4.69E-01	3.26E-04	1.58E-04
447	1/27/75	L-4064	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
448	2/4/75	L-4065	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
449	2/19/75	C-2576	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
450	2/19/75	B-3215	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
451	2/19/75	B-3252S	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
452	2/19/75	C-2554S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
453	2/19/75	B-3257	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
454	6/17/75	L-4100S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
455	6/17/75	L-4067	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
456	6/24/75	L-4105S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
457	6/24/75	L-4104S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
458	7/1/75	L-4066	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
459	7/1/75	L-4102S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
460	7/7/75	L-4068	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
461	7/7/75	L-4101S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
462	7/14/75	L-4103S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
463	7/21/75	L-4106S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
464	7/21/75	L-4107S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
465	7/29/75	L-4108S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
466	8/12/75	B-3258	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
467	8/12/75	B-3256	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
468	8/19/75	C-2583	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
469	8/19/75	C-2595	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
470	8/27/75	C-2606	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
471	8/27/75	C-2627	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
472	9/8/75	B-3255	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
473	9/23/75	B-3243	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
474	9/23/75	C-2611	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
475	9/29/75	C-2609S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
476	9/29/75	C-2622	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
477	10/13/75	B-3263	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
478	10/13/75	B-3202H	Half-Worth	17,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
479	10/13/75	C-2594S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
480	10/27/75	C-2592	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
481	10/27/75	C-2602S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
482	10/27/75	C-2586	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
483	12/2/75	C-2623	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
484	12/9/75	C-2625	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
485	12/15/75	C-2601	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
486	12/15/75	C-2596	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
487	12/15/75	C-2590	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
488	12/22/75	B-3266	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
489	12/22/75	C-2593	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
490	12/22/75	C-2615	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
491	12/22/75	C-2613	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
492	12/29/75	C-2578	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
493	12/29/75	B-3163D	Blanket region core driver	14,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
494	12/29/75	B-3264	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
495	12/29/75	C-2587	Core driver	18,934	9.27E-04	6.61E-07	5.80E+01	3.96E-03	2.93E-01	2.04E-04	9.88E-05
Subtotal for 1975 =				1,025,932	4.55E-01	2.61E-04	2.92E+04	1.99E+00	1.48E+02	1.03E-01	5.01E-02
496	1/13/76	B-3254	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
497	1/13/76	B-3265	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
498	1/13/76	C-2610	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
499	1/13/76	C-2604S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
500	1/20/76	C-2603S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
501	1/20/76	C-2589	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
502	1/20/76	C-2588	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
503	1/20/76	B-3270	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
504	1/20/76	C-2621S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
505	1/20/76	C-2585	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
506	1/26/76	B-3269	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
507	1/26/76	B-3223H	Half-Worth	17,261	1.54E-03	4.96E-07	1.03E+02	7.03E-03	5.27E-01	3.71E-04	1.80E-04
508	1/26/76	B-3261	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
509	1/26/76	B-3267S	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
510	1/26/76	L-4114S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
511	1/26/76	L-4109S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
512	1/26/76	L-4110S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
513	1/26/76	B-3271	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
514	1/26/76	L-4113S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
515	1/31/76	L-4117S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
516	1/31/76	C-2626	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
517	1/31/76	L-4115S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
518	1/31/76	L-4118S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
519	1/31/76	C-2632H	Half-Worth	21,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
520	1/31/76	L-4111S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
521	1/31/76	L-4112S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
522	1/31/76	B-3277	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
523	1/31/76	C-2600S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
524	1/31/76	L-4069	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
525	2/9/76	B-3268	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
526	2/16/76	B-3274S	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
527	3/9/76	B-3278	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
528	3/9/76	B-3276	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
529	3/9/76	B-3293T	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
530	3/30/76	L-4122S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
531	3/30/76	B-3284	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
532	3/30/76	L-4120S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
533	3/30/76	C-2605	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
534	3/30/76	L-4123S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
535	7/12/76	L-4071S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
536	7/12/76	C-2598	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
537	7/12/76	L-4125S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
538	7/13/76	C-2630	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
539	7/13/76	C-2612	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
540	7/13/76	B-3262S	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
541	7/13/76	C-2616S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
542	7/16/76	B-3301	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
543	7/16/76	B-3303	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
544	7/16/76	C-2641	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
545	7/16/76	C-2619	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04

Table C-8. (continued).

Item No.	Shipping date	SA No.	SA Description	SA steel Mass (g)	C-14 (Ci)	Cl-36 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	NB-94 (Ci)	Tc-99 (Ci)
546	7/16/76	B-3286	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
547	7/16/76	C-2643	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
548	7/22/76	C-2644	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
549	7/22/76	C-2631S	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
550	7/22/76	B-3300R	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
551	7/22/76	L-4124S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
552	7/22/76	C-2607	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
553	7/22/76	L-4119S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
554	7/27/76	C-2608	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
555	7/27/76	C-2620	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
556	7/27/76	C-2618	Core driver	18,934	9.27E-03	6.61E-06	5.80E+02	3.96E-02	2.93E+00	2.04E-03	9.88E-04
557	7/27/76	B-3296	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
558	7/27/76	B-3304	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
559	7/29/76	L-4126S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
560	7/29/76	B-3297	Blanket region core driver	18,934	9.63E-03	3.10E-06	6.46E+02	4.39E-02	3.29E+00	2.32E-03	1.13E-03
561	7/29/76	L-4127S	Controls	18,934	9.45E-03	4.85E-06	6.13E+02	4.18E-02	3.11E+00	2.18E-03	1.06E-03
Subtotal for 1976 =				1,250,988	6.16E-01	3.19E-04	3.99E+04	2.72E+00	2.03E+02	1.42E-01	6.87E-02
Grand total =				9,049,192	2.56E+00	1.40E-03	1.65E+05	1.12E+01	8.37E+02	5.85E-01	2.84E-01

C-6. REFERENCES

- ASM, 1981, *A Handbook of Data About Metals and Metalworking*, Materials Park, OH: American Society for Metals.
- Bjorklund W. J., G. F. Offutt, and R. D. Denney, 1974, "First Electrolytic Dissolution Campaign," ICP-1028, UC-10, February 1974.
- Evans, J. C., E. L. Lepel, R. W. Sanders, C. L. Wilkerson, W. Silker, C. W. Thomas, K. H. Abel, D. R. Robertson, 1984, *Long-Lived Activation Products in Reactor Materials*, NUREG/CR-3474, pp. 43-48.
- Houston S., Jonas E. D., Wendt K. M. (Editor), 1991, "A Review of Fuel Processing Campaign 37 Fourth Electrolytic Dissolution of EBR-II Fuel at the Idaho Chemical Processing Plant," WIN-246, January 1991.
- Carboneau, Michael L. and James A. Vail, 2004, *Estimated Radiological Inventory Sent from Argonne National Laboratory-West to the Subsurface Disposal Area from 1952 through 1993*, INEEL/EXT-02-01385, Rev. 0, Idaho National Engineering and Environmental Laboratory.
- Moghissi, A. A., W. G. Herschel, and S. A. Hobart, 1986, *Radioactive Waste Technology*, American Society of Mechanical Engineers, page 507.
- Mortimer S. R., 1978, "Second Electrolytic Dissolution Campaign of EBR-II Fuel at ICPP," ICP-1168, UC-10, December 1978.
- Mortimer S. R., 1981, "Third Electrolytic Dissolution Campaign of EBR-II at ICPP," ENICO-1078, UC-86, UC-10, June 1981.
- Smith R. R., 1974, "Final Safety Analysis for ICPP-603 Fuel Storage Basin Cleanup Systems," ACI-132, February 1974.